

## Integrated Wavelength Router

### Abstract

5           A router comprises a demultiplexer arranged to receive an input WDM signal  
containing  $N$  wavelengths, and apply its output, namely, the  $N$  separated the  
wavelengths, to a binary tree containing  $\log_2 K$  stages of interconnected  $1 \times 2$  switches.  
The switches can be integrated, and have their outputs crossing each other at each  
stage. The outputs of the final stage are applied to, and combined in,  $K$  multiplexers,  
10       which provide the  $K$  outputs of the router. If desired, a set of shutters can be  
interposed in the waveguides leading to the multiplexer inputs, thereby providing  
additional isolation.

10035623-110101